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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,747	12/24/2003	Takashi Sunohara	NPR-133	9683
20374	7590	08/10/2006		
KUBOVCIK & KUBOVCIK SUITE 710 900 17TH STREET NW WASHINGTON, DC 20006			EXAMINER KIM, SUN U	
			ART UNIT 1723	PAPER NUMBER

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,747

Applicant(s)

SUNOHARA ET AL.

Examiner

John Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,9,10,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,9,10,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over English translated copy of FR 2,267,138 (hereinafter referred to as FR '138) in view of Bogart (US Pat. No. 4,308,654). FR '138 teaches a dialyzer comprising a cylindrical case (15) or connecting pieces (8, 9) containing hollow fiber bundle (2) enveloped in a elastic tube placed in a gap between the inner wall (16) of the case (15) or inner wall of the connecting pieces (8, 9) and the hollow fiber bundle (2) and the tube substantially contacting the inner wall (16) of the case (15) via a sealing joint (17) or the inner wall of the connecting pieces (8, 9) (see figures 1-2; page 5, lines 8-20; page 7, line 14 - page 8, line 20; page 9, line 7 – page 10, line 2; page 12, line 9 – page 17, line 14). Claim 1 essentially differs from the dialyzer of FR '138 in reciting that a lubricant is provided between an outer surface of the elastic tube and the inner wall of the case. Bogart

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teaches a hollow fiber membrane module comprising a flexible envelop (20) in a form of tube containing a hollow fiber bundle (22) and placed in a cylindrical housing (10) wherein lubricant is provided on the exterior surface of the envelope or on the interior surface of the housing (10) to facilitate the insertion of hollow fiber bundle in the flexible envelope in the housing (see figure 1; col. 3, lines 21-22; col. 3, lines 38-60; col. 6, line 52 – col. 7, line 4). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide lubricant between an outer surface of the elastic tube and the inner wall of the case of FR '138 for facilitating the insertion of hollow fiber bundle in the flexible envelope in the housing as suggested by Bogart.

3. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 103 (a) as being unpatentable over FR 2 542 203 (hereinafter referred to as FR '203) in view of Bogart. FR '203 teaches a dialyzer comprising a cylindrical case (2) containing hollow fibers (11) enveloped in a elastic tube (12) placed in a gap between the inner wall of the case (2) and the hollow fiber bundle (11) and the tube (12) substantially contacting the inner wall of the case (2) and having ribs (13) on an outer circumferential surface of the tube (12) (see figure 3; page 3, lines 7-21). Claim 1 essentially differs from the dialyzer of FR '203 in reciting that a lubricant is provided between an outer surface of the elastic tube and the inner wall of the case. Bogart teaches a hollow fiber membrane module comprising a flexible envelop (20) in a form of tube containing a hollow fiber bundle (22) and placed in a cylindrical housing (10) wherein lubricant is provided on the exterior surface of the envelope or on the interior surface of the housing (10) to facilitate the insertion of hollow fiber bundle in the flexible envelope in the housing (see figure 1; col. 3, lines 21-22; col. 3, lines 38-60; col. 6, line 52 – col. 7, line 4). It would have been obvious to a person of ordinary

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skill in the art at the time the invention was made to provide lubricant between an outer surface of the elastic tube and the inner wall of the case of FR '203 for facilitating the insertion of hollow fiber bundle in the flexible envelope in the housing as suggested by Bogart. Regarding claim 2, Bogart teaches ribs (13) on an outer circumferential surface of the tube (12) (see figure 3; page 3, lines 7-21). Regarding claims 5-6, it would have been obvious to a person of ordinary skill in the art to provide a plurality of elastic tubes in the case of FR '203 since duplication of parts has no patentable significance unless a new and unexpected result is produced. In re Harza, 274 F. 2d 669, 124 USPQ 378 (CCPA 1960).

4. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spekle et al (US Pat. No. 4,219,426). Spekle et al teach a dialyzer comprising a cylindrical case (2) containing hollow fibers (17) surrounded by plurality of elastic rings (24, 25, 26) in a gap between the inner wall of the case (2) and the hollow fiber bundle (11) and the rings (24, 25, 26) substantially contacting the inner wall of the case (2) (see figures 3-9; col. 3, line 26 – col. 5, line 26). Elastic rings are equivalent structure to claimed elastic tubes. Claim 1 essentially differs from the dialyzer of Spekle et al in reciting that a lubricant is provided between an outer surface of the elastic tube and the inner wall of the case. Bogart teaches a hollow fiber membrane module comprising a flexible envelop (20) in a form of tube containing a hollow fiber bundle (22) and placed in a cylindrical housing (10) wherein lubricant is provided on the exterior surface of the envelope or on the interior surface of the housing (10) to facilitate the insertion of hollow fiber bundle in the flexible envelope in the housing (see figure 1; col. 3, lines 21-22; col. 3, lines 38-60; col. 6, line 52 – col. 7, line 4). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide lubricant between an outer surface

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of the elastic tube and the inner wall of the case of Spekle et al for facilitating the insertion of hollow fiber bundle in the flexible envelope in the housing as suggested by Bogart. Regarding claim 5, Spekle et al teach a plurality of elastic rings (24, 25, 26) substantially contacting the inner wall of the case (2) (see figures 3-9; col. 3, line 26 – col. 5, line 26).

5. Claims 9-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR '203 in view of Bogart as applied to claim 1-2 and 5-6 above, and further in view of Rekers (US Pat. No. 6,251,275). FR '203 in view of Bogart teach the dialyzer as described in above paragraph. Claims 9-10 and 13-14 essentially differ from the dialyzer of FR '203 in view of Bogart in reciting a concave portion formed on an inner wall of the case. Rekers teaches a membrane module having hollow fiber membranes (62) and an circumferential grooves in a concave shape on the inner wall of the housing to provide additional permeate channels (see Fig. 1, 8; col. 2, lines 49-56; col. 6, lines 55-62). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide concave portions on the inner wall of the case of FR '203 in view of Bogart to provide additional permeate channels to communicate with permeate chamber as suggested by Rekers (see col. 2, lines 48-57).


6. Applicant's arguments with respect to claims 1-2, 5-6, 9-10 and 13-14 have been considered but are moot in view of the new ground(s) of rejection. The indicated allowability of original claims 3-4 and 6-16 is withdrawn in view of the newly discovered reference(s) to Bogart and Rekers. Rejections based on the newly cited references were made in above paragraphs.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is 571-272-1142. The examiner can normally be reached on Monday-Friday 7 a.m. - 3:30 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Kim
Primary Examiner
Art Unit 1723

JK
August 7, 2006